

【CLAIMS】

1. An automatic document generation system in an e-business environment, the automatic document generation system comprising:

a document generation rule formulator used by a user to conveniently
5 designate a document generation rule through a graphic user interface;

a document component library for storing and managing document component summary information and a document component;

a document generation rule processor for collecting document components required for document assembly from the document component
10 library, and generating a grammar neutral document object, based on a document generation rule; and

a document grammar connector for converting the grammar neutral document object having an appropriate form for being processed in a program of a computer system into a grammar-connected document object that is used
15 in an actual business and is formed in a string type which is recognizable by the user.

2. The automatic document generation system of claim 1, wherein the document generation rule formulator comprises:

20 a component selector for displaying a usable component item provided by a corresponding library based on document component summary information searched in the document component library, the document component summary information including at least a component ID, a component name, and a component type, and optionally including various different types of

information that represent other components:

a document component assembler for modeling a component structure through a graphic user interface based on a user input, the user dragging the required document component appearing in the component selector and dropping the documents at a suitable location in the document component assembler to generate a document structure, in which the structure is formulated as an assembly rule, and the assembly rule includes IDs of all document components and structural information between each component; and

a context condition compiler for compiling a context condition realized through pairs of condition and action sentences, inserting it into a document structure, and formulating a context rule that processes the action sentences in the document generation rule processor when the condition sentence satisfies a specific business context during document assembly,

wherein the assembly rule and the context rule are output as a single document generation rule.

3. The automatic document generation system of claim 1, wherein the document component library is a public storage area for storing and managing the document components that may be commonly used in each business system, the document component library comprising:

the document component summary information recording various document components that constitute business documents and detailed information on all components included in a present library; and

a component library interface for connection to an external module,
wherein the document generation rule formulator searches the
document component summary information through the component library
interface, the document generation rule processor uses a document component
5 ID provided to each component as a specific number to collect the document
components required for document assembly, and the document components
stored in the document component library include a simple component formed
in a single type and a complex component including a plurality of simple
components.

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4. The automatic document generation system of claim 1, wherein
the document generation rule processor comprises:

a component assembler for generating a grammar neutral document
object based on the document generation rule generated by the document
15 generation rule formulator and processing an assembly rule; and

a context processor for processing a context rule, wherein

the component assembler reads assembly rules in the document
generation rules, uses a document component ID to collect the document
components required in the assembly rule from the document component library,
20 assembles the collected document components by using structural information
between components, and outputs an assembled component, and

the context processor reads the context rule in the document generation
rules, and when a specific business context satisfies the conditions of the
context rules, applies a designated action sentence to the assembled

component to ultimately generate the grammar neutral document object.

5. The automatic document generation system of claim 1, wherein the document grammar connector comprises:

5 a grammar converter for supporting suitable grammar for a specific business system, and converting the grammar neutral document object having an appropriate form for being processed in a program of a computer system into a grammar-connected document object, the grammar neutral document object generated by the document generation rule processor; and

10 a document output unit for realizing a grammar-connected document that is used in an actual business and is formed in a string type recognizable by a user, and storing the grammar-connected document on a disk.